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- (c) selecting the light source intensity, spatial intensity distribution, spectral wavelength characteristic and directionality aimings of the respective multiplicity of light sources mounted on said structure required to efficiently provide the predetermined surface areas with the design illuminance.

69 [49] The method for designing the illuminating device of claim 68 including power control elements according to correct lighting practice, providing light intensity, spectrum, glare related luminous exitance and spatial distribution of intensity and spectrum, suited to a living space to be illuminated further comprising steps selected from the group consisting of:

- (a) determining light power required to effect the required illumination over the area;
- (b) selecting light sources capable of producing required intensities and spectrum at highest conversion efficiencies at lowest economic cost;
- (c) determining light source beam spreads;
- (d) determining light source aimings for the required distribution pattern;
- (e) determining electronics to control and power light source;
- (f) determining lighting fixture surface geometry size and glare rating;
- (g) testing whether the glare rating for the viewing angle is acceptable;
- (h) if the glare rating is not acceptable, changing light source beam spread and fixture geometries, or size, resulting in an acceptable glare rating;
- (i) when the glare rating is acceptable, then designing the luminaire aesthetics for the application

### Remarks

While the applicant has further amended the claims due to the examiners final rejection in an effort to obtain allowance, the applicant maintains, that perhaps aside from containing wording irregularities, the original claims clearly and distinctly define a novel and non-obvious invention. The examiner stated in the final rejection point 6 "*claims 36, 37, 40-45 and 47-49 were rejected on the basis of being anticipated by Vukosic and in point 8, Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vukosic in view*"

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of *Lys et al.* and also stated in point 9 that the "*applicant's amendments with respect to new claims 36-49 have been considered but are moot.*". The examiner has not given an adequate explanation why the new claims are not persuasive over Vukosic in light of the applicants explanations offered in the interview of June 28<sup>th</sup>, 2006 and in the reply of August 18<sup>th</sup> 2006. The applicant submits that the final rejection status is unjustified. The applicant asks for reconsideration, has again amended the claims to clearly make sure they do not read on Vukosic or any other prior art but maintains the veracity of the initial arguments. This in light of the fact that a "warning lamp", especially the one disclosed by Vukosic with an omni directional light distribution obtained through the use of a refractor lens Fig.3 [36], is not intended to, not constructed to and cannot function as an illumination device capable of illuminating surfaces in a living space (claim 36). It cannot illuminate surfaces non-equidistant from the light source according to correct principles of lighting practice (see par. 0013). For instance, an example of correct lighting practice for a lighting application may be the uniformity of the illumination over an area (see par. 0021). Below are additional arguments offered by the applicant on a claim by claim basis which serve to backup the original and newly amended claims.

*The examiner wrote "Regarding claims 36, 37,40-45 and 47-49 Vukosic discloses"*

Claim 36: Although some of the words to used describe Vukosic's device may be the same as the claim since he is using LED's which a prime example of a light source usable according to the teachings of the present invention the comparison stops immediately. The specific features detailed in exact reading of claim 36 restrict its scope to a specific and totally different device. Claim 36 clearly stated the novelty of the inventive structure of the device shown in Fig. 2B where the multiple light source illumination device of present invention has LEDs specifically directed towards surfaces to be illuminated. Claim 36: " (c) said first light source mounted on the structure wherein the spatial light distribution of said first light source is aimed at a first surface in the living space; and (d) one or more additional light sources having a spatial light intensity distribution and spectral color distribution mounted to said structure where the spatial light intensity distribution of the additional light source is aimed at

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additional surfaces in the living space. In other words, the independent light sources having their respective substantial directionality (see par. [0074]) are aimed in different directions relative to each other such that "the .. light sources ... orientations and aimings controls the illuminance .. provided to the predetermined surfaces". Nowhere in his specification does Vukosic mention the environment or orientation to that environment. What he does describe is a warning lamp, which is an indicator to be seen thus its luminance is important not its illuminance.

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As far as the examiner writes "and whereby a concentration of the light sources [16, 18] at particular orientations" the meaning of orientations is quite different. Vukosic (col. 2 lines 39 -64) describes Fig. 1,2,3 and 4 orderly arrays of LEDs on a flat circuit board any orientation the examiner is referring to is to the warning lamp elements. The orientation in claim 36 is relative to the surface areas. So Vukosic does not read on claim 36 or 37 with LEDs oriented to surfaces to impart illuminance thereon.

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Vukosic warning lamp provides multi status indication by being illuminated in selected ones of a plurality of colors or by flashing a selected color or colors sequentially. The colors again are to be seen on the lamp and the light effect of the spectral distribution of a plurality of LEDs on surfaces is not taught in his invention. In other words Vukosic can not read on claim 36 where " ...controls the illuminance and color spectrum provided to the predetermined surface areas within the living space allowing for their optimization". f Thus combinations effecting the light intensity but also for color mixing as well with an example of the benefit having been described in paragraph [0115]; "Constant color is maintained in a room with an influx of a less desirable color temperature light on one side." Claim 23 (based on Claim 20)clearly describes how the plurality of independent light sources are attached to the structure in concert with the design requirements of the lighting environment in a way totally different from the simple congruent array of LEDs proposed by Vukosic (column 2 lines 62).

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Regarding claim 40 Vukosics oriented structure again it is not oriented in relation to predetermined surfaces. Regarding claim 41 again the claim is dependant on claim 36 and cannot be seen without the context of claim 36 as part of a device illuminating surfaces in a living space.

Regarding claim 42 it most clearly states that is different function and output from Vukosic's device "controlling" and the applicant found no support in the abstract or specification to the light control function described below. Claim 42: " The illuminating device of claim 37 is a lighting application oriented luminaire based on the visual tasks to be carried out within the living space designed according to principles of lighting practice, providing controlled illumination intensity, spectrum, luminous exitance and spatial distribution of intensity and spectrum, suited to the specific lighting application, ...." 5 10

Regarding claim 43, again there is no comparison. Vukosic is sensing internal processes in the warning lamp while the sensors of claim 43 are sensing changes in the external lighting environment and thus Vukosic does not read on claim 43. 15

Regarding claim 44, it is dependant on claim 36 so its structure serves the purpose of illuminate surfaces in a controlled means and the structure is a function of the purpose. So the two structures are designed around different criteria and are not similar other than for mounting and powering LEDs. 20

Regarding claim 45, it is again dependant on claim 36 so it serves the purpose of powering the light sources to illuminate surfaces in a controlled color and intensity which includes dimming and varying the amount of intensity on side of the structure versus that on the other side to compensate for daylight entering a window adjacent to one side of the luminaries coverage area. (See paragraph 0064). Thus Vukosinc's power supply does not read on claim 45. Claim 46 is again not read upon by Lys since Lys and Vukosic could not have envisioned a power supply in communication with light sources in order independently vary the power signal as a function of the resultant illuminance and other 25

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reliability features as explained in the specification in paragraphs 0073, 0074 and 0077 among others.

Thus it has been shown that the Claims clearly describes a unique illuminating device and a design method relevant only to multiple light source illumination devices having angularly differentiated light source mounted thereon as disclosed in this invention and that the prior art does not read on the claims. In addition the novelty and unobviousness of the present invention has been reviewed.

### Conclusion

The applicant has revised the claims and requests that the above claims now be amended as in new claims 50 -69. The applicant submits that the claims are now in proper form to place the case in condition for allowance which action he respectfully solicits.

Very respectfully.



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